

Remarks

Claims 3, 4, 5, 6, 8, 11 and 14 to 18 have been amended. All of the amendments to the claims are formalistic in nature and were made to more clearly recite the claimed invention. No new matter has been introduced by any of the amendments.

1. Rejection under 35 U.S.C. § 103(a)

A. No. 05-60724 in view of Ghahramani

Claims 1 to 9, 11, 12, 16, 17 and 19 are rejected as allegedly obvious over the English-language translation of Patent Application Public Disclosure No. 05-60724 (“No. 05-60724”) in view of U.S. Patent 6,340,741 to Ghahramani *et al.* (“Ghahramani”). Citing claim 1 and paragraph [0006] of No. 05-60724 the Examiner asserts that No. 05-60724 discloses a chloride selective electrode membrane comprising a polymeric matrix, wherein the matrix comprises an epoxy resin and a polyimide as an amine agent. While acknowledging that No. 05-60724 does not teach using the amine agent in stoichiometric excess, the Examiner asserts that this feature of Applicants’ claims is either (1) simply a matter of optimization or (2) taught by Ghahramani as leading to high degree of membrane selectivity. Regarding claims 3 to 9 and 11, the Examiner stated that it was not clear how these product claims are limited by the recitation of particular ingredients because no reaction steps are specified.

Applicants respectfully disagree with the Examiner’s rejection of Applicants’ claims based on the teaching of No. 05-60724 in view of Ghahramani. No. 05-60724 requires the presence of a chloride ion-selective sensing material which is separate and distinct from the described mixture of a polythiol epoxy resin and a polyamide epoxy resin. Stated differently, No. 05-60724 does not either teach or suggest that the polythiol epoxy resin or polyamide epoxy resin may have chloride ion-selective properties – thus, the requirement of a separate chloride ion-selective material in the compositions of No. 05-60724. In contrast, Applicants have discovered that the particular group of amine agents recited in claim 1 can function as chloride ion exchangers or chloride ion-selective agents as well as a curing agent for the epoxy resin, thus eliminating the need for a separate chloride ion-selective material. Based on a reading of No. 05-

60724, a person of ordinary skill in the art would certainly not have a reasonable expectation of success of generating a chloride ion-selective membrane if he were to remove the described chloride ion-selective sensing material from the electrode membrane.

Further, the chloride ion-selective sensing materials described in No. 05-60724 are quaternary ammonium salts and are chosen based on the chemical environment (hydrophilic vs. lipophilic) provided by the polythiol and polyamide epoxy resins. See, *e.g.*, paragraph [0012] at page 6 and paragraph [0015] at page 8 of No. 05-60724. As indicated in the Background section of Applicants' specification, fluids in contact with the membrane of the electrode can extract quaternary ammonium salts out of the membrane causing the sensitivity of the membrane to be compromised and also limiting the useful life of the electrode. See p. 2, lines 5-15 of Applicants' specification. Use of the amine agents recited in Applicants' claims as the chloride ion selective agent eliminates the need to employ additional chloride ionophores or chloride ion exchange agents such as quaternary ammonium compounds. Therefore, Applicants submit that No. 05-60724 is not of particular relevance for the purpose of evaluating the novelty and/or obviousness of Applicants' claimed invention.

Ghahramani cannot remedy the deficiencies present in No. 05-60724. Ghahramani describes a membrane for use in chloride ion-sensitive electrodes that also contains a quaternary ammonium salt as the chloride ion-selective component. The membrane is also described as containing a polymeric matrix of an epoxy resin and an amino compound but there is no teaching or suggestion that the amino compound should be selected from Applicants' claimed recitation of polyamides, amidoamines and mixtures thereof or that there is an unexpected improvement in chloride ion selectivity based on the presence of these particular amine agents.

For at least the above-discussed reasons, No. 05-60724 and Ghahramani, either alone or in combination, do not render obvious Applicants' claimed invention. Applicants therefore request that this rejection be withdrawn.

Regarding the Examiner's comments about claims 3-9 and 11 as not specifying any reaction steps, Applicants have amended claims 3, 11 and 14 to address this concern.

B. Craig in view of No. 05-60724

Claim 18 is rejected as allegedly obvious over U.S. Patent 6,015,480 to *Craig et al.* ("Craig") in view of No. 05-60724. According to the Examiner, it would have been obvious to use the chloride selective membrane of No. 05-60724 in the invention of Craig.

Applicants respectfully disagree with the Examiner's rejection of Applicants' claim 18 based on the teaching of Craig in view of No. 05-60724 for at least the reason, discussed above in Section A, *i.e.*, that No. 05-60724 does not teach or suggest Applicants' claimed chloride ion selective membrane. Further, there is no motivation to combine the teachings of Craig with No. 05-60724. Therefore, Applicants request that this rejection be withdrawn.

2. Allowable Subject Matter

Claims 10, 13 to 15, 20 and 21 are objected to as being dependent on a rejected base claim, but are indicated by the Examiner as being allowable if rewritten in independent form.

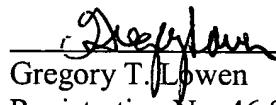
3. Conclusion

The foregoing amendments and remarks are being made to place the application in a condition for allowance. Applicants respectfully request reconsideration and the timely allowance of the pending claims. Should the Examiner find that an interview would be helpful to further prosecution of this application, he is invited to telephone the undersigned at his convenience.

Except for issue fees payable under 37 C.F.R. 1.18, the Commissioner is hereby authorized by this paper to charge any additional fees during the entire pendency of this application including fees due under 37 C.F.R. §§ 1.16 and 1.17 which may be required, including any required extension of time fees, or to credit any overpayment to Deposit Account 50-0310. This paragraph is intended to be a **Constructive Petition for Extension of Time** in accordance with 37 C.F.R. 1.136(a)(3).

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Morgan, Lewis & Bockius LLP
Customer No. **09629**
1111 Pennsylvania Avenue, N.W.
Washington, D.C. 20004
Tel: 202-739-3000
Fax: 202-739-3001

Respectfully submitted
Morgan, Lewis & Bockius LLP



Gregory T. Lowen
Registration No. 46,882
Direct: 202-739-5915